VEAL CALF
PRODUCTION AND MARKETING IN THE NORTHEAST

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Preface

This report required a large number of simplifying assumptions. Such a requirement leaves a big spread between an ideal model and the real world, where conditions change frequently and interpretations must be made. Therefore, this service report should be used as a guide for thinking and not accepted as established fact to fit each person or situation.

The study was conducted to take an overall view of potential for increasing veal and calves for beef production. It looks at ways to improve farm income through better use of calves from dairy cows and the various combination of marketing products for consumers.

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Highlights

In the North Atlantic States--the second largest dairy-calf producing areas in the United States--veal production declined during the past 5 years. However, there is some indication that the decline has been slowed and may stabilize near the present rate.

Recent developments in management and feed mixes, notably milk replacers, encourage the production of a high-quality calf yielding more than twice the amount of veal commonly produced 20 years ago.

Most dairymen, however, sell calves as soon as the colostrum in the cow's milk disappears--usually under 2 weeks. Calves are considered a problem and of little value except to assure a fresh cow. Neither the price nor the meat produced from young, lightweight calves has been considered important to the dairy or the meat industry when calves are marketed as bob veal.

Demand for veal remains important to a declining number of people, mostly ethnic groups. Consumption nationwide dropped from 10 pounds per person in 1954 to less than 3 pounds in 1971. A 29 percent drop occurred in the past 5 years, 1967 through 1971.

Veal still remains acceptable to those who are regular consumers, but people accustomed to beef do not buy veal.

Heaviest concentration of veal slaughtering facilities is in the North Atlantic region. These plants also buy many calves from the Midwest, but seldom operate at capacity. The plants have capacity enough to handle a 100-percent jump in veal slaughter. With excess slaughtering

capacity in the area, it does not appear feasible to construct new plants even with an increase in veal raising.

Producing heavy choice veal is a relatively new business. Because baby calves require attention similar to human young, management is the most important factor when developing a successful veal production venture.

While exceptionally high margins have been realized from veal production, returns on investment vary with the success of management, control of disease, cost of bob calves, and market prices of finished veal. It is a business that requires substantial capital with fixed costs, ranging from about $20 to $200 per animal unit capacity based on type of facilities and mechanization. The initial cost of calves represents 25 to 40 percent of the cost of production, depending on feed costs and other items.

Procurement and marketing costs are related to the number of calves purchased and sold. One man may handle as many as 250 veal calves as a full-time job. A smaller number of calves is only part-time work and income is correspondingly restricted.

Low-income people cannot enter the veal production business without substantial financial assistance. This group also requires extensive training and supervision.

Some evidence indicates farmers in the area could raise enough dairy calves to profitably ship them to farmers out of the area and to commercial feedlots. Local farmers or other local feeders could also feed calves on native grown grain for beef sale and increase their income substantially.

VEAL CALF PRODUCTION AND MARKETING IN THE NORTHEAST

R. L. Fox

North Atlantic States, an important dairy-cow area, have about 18 percent of the total production of the United States. Two States, New York and Pennsylvania, alone account for 13.7 percent of the number of cows in all of the United States. Only Wisconsin exceeds New York in number of dairy cows.

States with highest number of dairy cows on farms, Jan., 1972
1,000 head

Wisconsin	1,866	Michigan	473
New York	973	Iowa	465
Minnesota	971	Ohio	444
California	816	Texas	355
Pennsylvania	696	Missouri	337

While other regions have increased their beef cow numbers in relationship to dairy cows, the North Atlantic area had only 207,000 beef cows on farms January 1, 1972. The proportion of beef cows in Pennsylvania and New York is 14 and 7 percent, respectively, of the number of dairy cows. Changes have been slight in the last few years.

Table 1 shows that the North Atlantic region had 136,000 fewer dairy cows in 1972 than in 1968; however, the area retained its historical percentage of about 18 percent of the total United States dairy cow numbers.

Table 1.--Milk cows on North Atlantic and U.S. farms, Jan. 1, 1968 and 1972

Item	1968	1972
	1,000 head	
Maine	69	66
New Hampshire	39	36
Vermont	209	205
Massachusetts	69	62
Rhode Island	8	7
Connecticut	67	62
New York	1,039	973
New Jersey	79	64
Pennsylvania	728	696
United States	13,038	12,279

The high population concentrated in the North Atlantic region has encouraged farmers to remain in milk production because of nearby markets. Most of the region is an excellent grass and hay-producing area. These crops encourage the dairy business. Dairy cow numbers have declined in the region, but at a lesser rate than in most areas of the United States. Under existing conditions, the rate of decrease in number of dairy cows is expected to stabilize within the next few years in the North Atlantic region. If this situation occurs, we can expect about 1.2 million to 1.4 million dairy calves to be available for slaughter or for additional feeding. This is above the normal demand for replacements going into cow herds.

Existing Practices

Most dairymen dispose of their calf crop at a very young age, usually as soon as the colostrum in the milk has disappeared. The calves are marketed as bob veal, or deacon calves. They may vary in weight from 70 to 120 pounds. A few people keep heifer calves for herd replacements, but even this practice has become a specialized business. The large percentage of the calves from dairy cows are sold by most dairymen as soon as age permits. It has been proved that it is more profitable for the dairymen to devote their resources to production and marketing of milk.

Prices for calves are in the $35 to $50 range, depending upon quality and weight.[1/] These prices also encourage dairymen to market their calves as soon as possible. It is risky to carry calves on cows for a longer period, as returns generally are lower than the cost of the milk fed or the time spent handling the calf.

Existing market outlets for dairy calves are as follows:

1. Heifer calves for future herd replacements.
2. Calves for heavy premium-veal production.
3. Calves for fed beef.
4. Bull replacements.
5. Young calves for slaughter.

Heifer calves needed for future herd replacements are finding a restricted market in the North Atlantic area as cow numbers decline. Several people purchase heifer calves, raise them as a part-time job, and

1/ Prices for young calves vary upon demand at a particular time. Prices used were for winter of 1971-72.

later sell to dairy-herd owners, who no longer produce their own heifers. Many herd replacements are secured outside the region, including Wisconsin and Canada. Evidently these heifers can be purchased at lower costs than they can be raised in the North Atlantic area. It is estimated that less than 25 percent of the calves sold become herd replacements.

Marketing heavy premium veal calves is limited by rather definite restrictions. Calves should be choice bulls, weigh about 100 pounds, and be available in quantity to supply orders at a definite time. There are no accurate records of the number of calves being sold in this type of outlet, but it is estimated that less than 5 percent of the young bull calves are used for this purpose. Another factor that keeps this market small is competition from veal slaughterers and processors. The existing demand for light veal often outbids those interested in feeding calves for heavy veal. Returns from premium veal must compensate for the high risk of keeping an animal 12 to 15 weeks as compared with 1 week.

A growing outlet for good dairy calves is the beef market. While this outlet is less important in the North Atlantic than in the upper Midwest region, it is becoming more important. It competes with both heavy-veal growers and light-calf slaughterers. A sample of prices received for New York State lightweight calves was compared with Wisconsin prices. Wisconsin prices ranged from $7 to $12 higher per hundredweight than those in New York. Reason for this difference is the greater demand for calves to be grown out to beef weight of approximately 1,000 pounds from the Midwest area. The North Atlantic region may be able to capitalize upon the demand for Holstein beef and narrow the present price differential

between regions. This area remains the biggest source of Holstein calves to supply a growing national market.

Young calves for bull replacements find a very limited market. Animals moving through auction markets and dealers have little or no history and cannot be used in good dairy herds. Also artificial insemination largely has replaced the need for dairymen to buy and grow bulls from calves. Few bull calves are purchased to grow into bulls for small dairy herds; however, such a trend does not strongly compete for the calf supply.

The largest market outlets for dairy calves in the North Atlantic region are the slaughterers and processors. They slaughter thousands of calves in the lightweight range of 65 pounds to 120 pounds. The small low-grade calves are boned and used in sausages, soups, or other mixed-foods. Better lightweight veal is sold for retail cuts. Ethnic trade in the large cities is shrinking, but still remains a viable factor in keeping this calf price at a high competitive level compared with the other outlets.

Demand for Veal

The people in the North Atlantic area are the highest consumers of veal in the United States. It has been estimated that per capita consumption of veal in the large urban cities along the East Coast is 20 times higher than that in the rest of the country.

Veal is a meat that has high appeal for many Americans of European origin. It is also a popular item in quality restaurants, hotels, and

institutions. It lends itself to many methods of preparation to produce some of the more exotic meat dishes, although the meat by itself has little flavor. Veal is high in protein content, as compared with other meats, and has little wasty fat covering. Its popularity in the North Atlantic region is indicated because most of the veal is slaughtered in this area. Many calves are shipped into the region for slaughter and ultimate consumption from the Eastern Corn Belt.

Commercial calf slaughter in the North Atlantic States, which mostly produce dairy veal, has decreased by more than 400,000 head in the past 5 years. This means that fewer calves are shipped in, less produced in the area, and more are being used for beef animals.

The so-called popularity of veal has not encouraged production as might be expected. Table 2 shows that veal production in the United States has dropped from 792 million to 542 million pounds from 1967 to 1971, or declined about 32 percent.

Table 2.--Veal production in U.S., 1967-71

Production	Year				
	1967	1968	1969	1970	1971
	Million pounds				
Commercial	749	696	640	558	516
Farm	43	39	33	30	26
Total	792	735	673	588	542

Rather definite assumptions can be made to justify the lower production figures: (1) The ethnic groups are being assimilated with other nationals and have changed their eating habits, (2) declining numbers

of dairy cows result in fewer calves for veal, (3) the expanding demand for beef has siphoned off many of the dairy calves to supply feedlots, (4) returns from veal production has been historically low, (5) veal production has tended to be restrictive for the labor involved requiring high-management skills to produce high-quality meat, (6) more money has been spent in advertising beef than veal, (7) price of veal cuts at retail is beyond the budget of most families, (8) lack of availability of supply and uniformity of quality has caused many meat outlets--hotels, restaurants, and institutions--to turn to other kinds of meat products, and (9) fewer chefs are knowledgeable in proper preparation of veal and veal meat dishes.

Both beef and pork consumption has increased during the past 5 years. Table 3 shows that per capita veal consumption has decreased from 3.8 to 2.7 pounds from 1967 to 1971. The per capita consumption of veal in 1954 was 10 pounds. Low use indicates that demand for veal is limited. The efforts of improving the feeding of dairy calves to heavier weights and higher quality are not expected to improve or change the demand for veal.

Table 3.--Per capita consumption of meat in the U.S., 1967-71

Item	Year				
	1967	1968	1969	1970	1971
	Pounds				
Beef	107	110	111	114	113
Pork	64	66	65	66	73
Lamb	3.9	3.7	3.4	3.3	3.2
Veal	3.8	3.6	3.3	2.9	2.7

Potential for Veal Production

Consideration must be given to the potential for continued veal production in the North Atlantic area, as it remains a substantial producer of calves from dairy cow herds. About 1.3 million calves were marketed in 1970. It is estimated that the number sold will stabilize near 1 million annually. About 500,000 will be sold at a few days of age either because of quality or attractive prices for bob veal. The remaining calves could be available for additional feeding to a heavier weight of veal or as dairy calves for beef.

While considerable efforts have been made to encourage feeding Holstein calves on milk replacer feed, it remains a relatively new type of veal production. The potential for this kind of meat remains unknown at the present. Important to any expansion will be the economics involved and the type of market demand that will reward the calf feeder.

Two methods of feeding and use are considered in this discussion. The first is the feeding of milk replacer to produce heavy premium veal calves weighing 250 to 325 pounds at 12 to 14 weeks of age. Under normal operating conditions, these calves would yield carcasses ranging from 175 to 250 pounds. The weights would produce about 100 pounds more meat per calf than is presently obtained from young lightweight calves in the form of veal. If the North Atlantic States were able to increase veal calf feeding to 200,000 head annually, the output of meat would rise about 15 million pounds. The second method of handling young dairy calves would be similar to the first with the exception that a less intensive feeding program would be followed and the calves would be carried to weights of

400 to 500 pounds. These calves would be destined to go into feedlots, where they would be finished on a high-concentrate ration. Two outlets appear feasible for this type of calf. One would be in the local areas where sufficient grains are produced to feed beef. The other would be in areas, such as the Corn Belt, where demand for Holstein calves for beef feeding is big. Beef production from the additional feeding of dairy-type calves could be increased by approximately 40 to 45 million pounds annually.

The United States Department of Agriculture has made recent changes in their grade standards to include veal grown from heavier calves. This change should benefit growers and processors because more quality veal can be made available for consumption. Slaughtering plant operators have accepted the handling of heavier veal readily. The larger calves have enabled slaughterers to turn out greater tonnage of meat with the same equipment and man-power, thereby reducing unit cost of slaughter veal. This makes the veal calf killing cost more nearly comparable to that of beef.

Although cuts from this kind of veal calf are larger than veal cuts of a few years ago, it finds a ready market. This kind of veal lends itself to making uniform portion--controlled cuts that are demanded by the better restaurants, airlines, and hotels.

Heavy veal appears to have gained good acceptance from consumers.

Slaughter Facilities

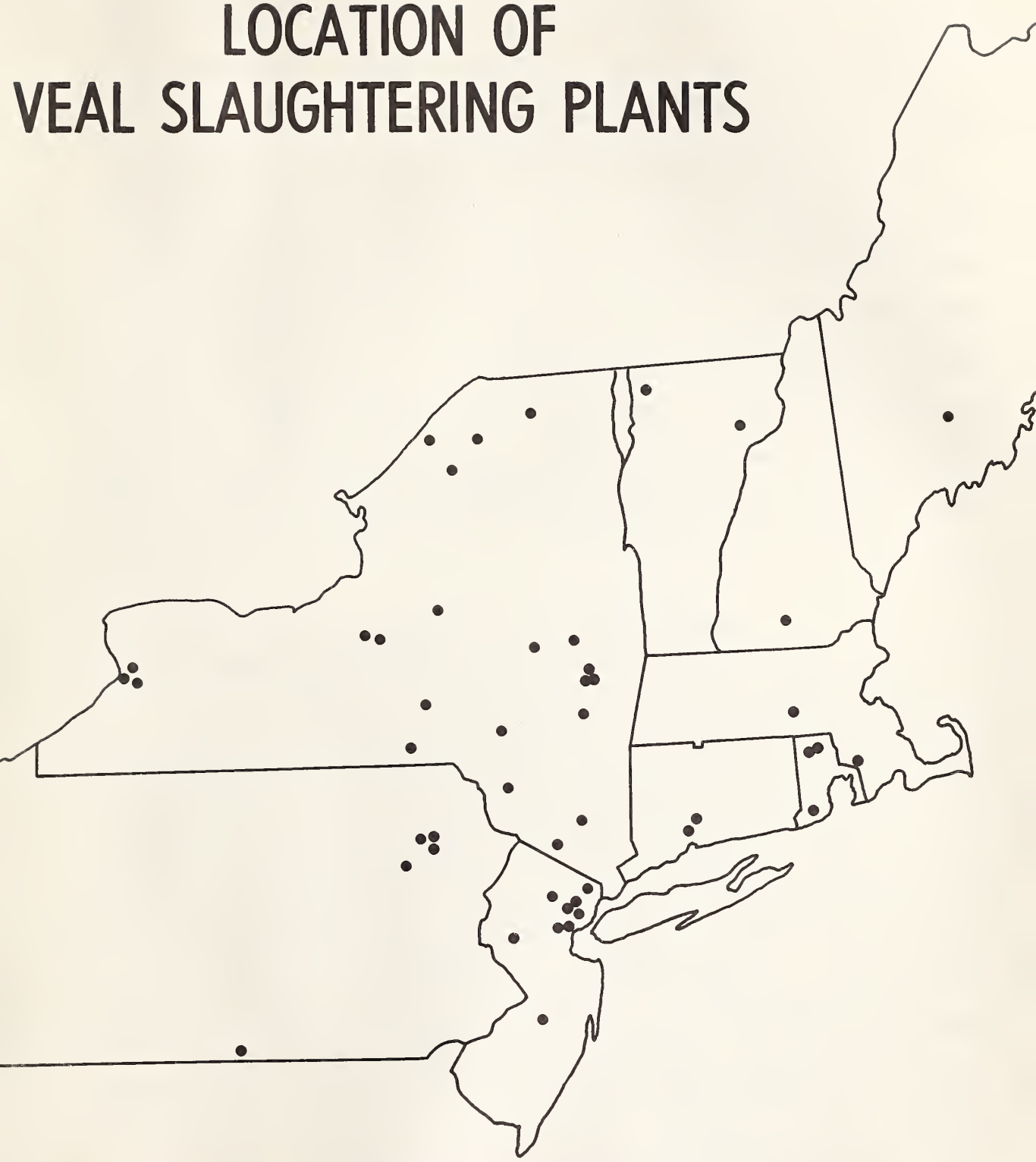
The North Atlantic region has ample veal slaughtering facilities to handle more than 2.5 million head. Less than 60 percent of the capacity of these plants was used in 1971 to handle calves. Many slaughter plants have been in operation in excess of 20 years and are becoming obsolete. While they meet the 1967 Wholesome Meat Act requirements, several need remodeling to maintain efficiency in slaughtering.

Lower numbers of calves available for slaughter has not encouraged the construction of new plants. In fact several plants that formerly specialized in veal-calf slaughter only have increased their beef slaughter capacity. This change has helped to capture an expanded market for additional meat products with less emphasis on veal. Other plants are converting to further processing of veal cuts ready for consumer or retail sale, instead of shipping veal carcasses in the traditional way. A few slaughter plants that normally operated near capacity have taken on limited custom slaughtering of calves for others that ceased operations.

A number of veal slaughterers discontinued operations, because of obsolete plants, lack of a uniform supply of calves, high price for veal calves, and narrow margins. Building a modern veal slaughtering-processing unit would cost more than $500,000 to serve a localized area and more to serve a region. Slaughter costs would be lower with a new modern slaughtering plant; however, the potential rate of return on new plant investment discourages new construction.

The appendix table lists those plants slaughtering all kinds of veal in 1971. The facilities are located in areas where substantial numbers

LOCATION OF VEAL SLAUGHTERING PLANTS



*See appendix table for name and location

of calves are available for slaughter and near market outlets where people consume large quantities of veal. Veal tends to change color rapidly and should be slaughtered near consuming centers.

While excess veal slaughtering capacity exists in the North Atlantic States, it is possible that two or three new plants may be constructed to replace facilities that have been condemned to make way for new highway construction. Present facilities on these sites are owned by reputable firms that are among the largest slaughterers in the area. These firms would probably be able to compete without new plants as market outlets are developed. A new slaughter plant, owned and operated by a new inexperienced firm, would probably have difficulty competing with established plants.

Markets for Live Dairy Calves

Present market outlets for dairy calves in the North Atlantic States are mainly restricted to auctions, dealers, and slaughtering plants. Direct purchases by slaughterers are only a small percentage of the total marketed. Calves are usually sold one or a few at a time. Slaughterers cannot afford to have a buyer at the plant buying from many individuals. This is the reason that auctions and dealers are the most important outlets for live calves. Calves purchased on the carcass-yield basis do not require an individual to make an appraisal of the live animal. The final returns to the grower are calculated by office personnel, using an accepted formula for pricing. Dealers handle a large share of the veal calves, either marketing them through the auction markets or delivering

to a slaughtering plant, where they have arrangements. The use of dealers by farmers to dispose of their calves is popular. The dealers pick up calves at the farms, saving the dairymen work. Many dairymen use the services of the dealer to supply replacement cows in their herds. This service provides a frequent contact between farmer and dealer, as calves are picked up often. The dealer often acts as a lender to farmers and ultimately brings together a larger number of calves.

Auctions have grown in importance as market outlets for calves, especially as more people are able to deliver their own calves. The auctions provide a place where all types of buyers may purchase calves in quantity. Calf slaughterers purchase in larger numbers at auctions for the auctions provide quantity and an opportunity to choose quality and weight.

Heavy Premium Veal Marketing

Heavy premium veal comes from a fast-growing calf that reaches 300 to 375 pounds in a short growing period. Its flesh resembles traditionally-grown veal that is marketed at about one-third of the age of heavy veal. It produces larger cuts and has more flesh in proportion to bone, hide, and other less valuable byproducts. This type of calf generally moves in different marketing channels from the lightweight calves. Many are under contract to feed dealers or veal slaughterers. Others are purchased through an order buyer filling orders for packers. A cooperative in New York order-sells these good heavyweight calves for several producers.

Producers of this hot-ration veal[2/] follow the practice of placing all calves on feed at one time or in one lot. Sales of each lot are made in their entirety to enable cleaning and sanitation treatment before new calves are brought in for feeding. By following this method, a buyer or a slaughterer is assured a definite number of animals on prescheduled dates.

Most slaughterers are involved with more calves than the premium-type veal calf because of limited supply and demand. Other calves including bob veal, heifers, and widely-varying weights are handled by most plants.

Methods of Settlement

The methods of settlement for hot-ration fed calves vary. This variety often makes it difficult to accurately compare prices obtained by different growers. Some buyers purchase these veal calves on a live-weight basis, generally requiring calves to be off feed for approximately 12 hours before sale. There are other instances where a time-period off feed is used plus a percentage shrink allowance that is taken from the live weight. Most slaughterers prefer to have this type of calf loaded at farms early in the morning, delivered to the plant, and killed as soon as possible. If the calves remain without feed longer than 12 hours, dehydration sets in and tissues shrink. This affects the yield of meat as well as the quality.

2/ Hot-ration veal is produced in 12 to 15 weeks using a milk substitute high in fat, minerals, and vitamin content that adds weight faster than natural cows milk.

Most calf producers in the North Atlantic States do not have scales on their farms, so the calves must be hauled to another location for weighing. The distance hauled before weighing affects the amount received for the calf, because shrinkage starts as soon as these calves are loaded. No price comparisons can be made between different growers, unless all weighing conditions are equal. The distance hauled before weighing tends to be in direct ratio to the amount of shrinkage. It is to the growers' advantage that weights are determined as near as possible to the place calves are fed when they are sold on a live-weight basis.

An increasing number of these calves fed on hot rations are purchased on the carcass-yield basis. The final settlement is made to the grower on the basis of carcass weighed at the slaughtering plant. Live weight has no effect on this type of settlement. However, the handling method used before loading, delivery, and slaughter do change the value received. If calves are taken off feed several hours before loading, delivery time is extended, or holding-at-plant lasts several hours, returns can be lowered substantially because of tissue shrinkage.

Other factors, involved in the carcass value received by calf producers, are determined by how calves are handled within the slaughter plants. The following are examples of practices:

(1) Calf carcasses are weighed hot with the hide on. A shrink allowance is made for chilled veal. Sometimes the hot weight may be used without shrink.

(2) Calf carcasses are weighed after being in the chill room after several hours to 2 or 3 days. The length of time under refrigeration in

the chill rooms results in wide variations of shrinkage, as chilling also takes moisture from the carcasses.

(3) Calf carcasses can be dressed in different ways in various plants, such as leaving more hide and neck on the carcasses, and other trim practices can change the value of the calf.

Premium calf growers have reported dressed yields ranging from 66 to 77 percent of the live weight of calves. A difference of 1 percent change in the carcass weight may change the value received by as much as one dollar per hundredweight. Other methods of handling, trimming, and weighing will result in similar differences of value to the grower. It is necessary to know the type of market settlement arrangement if a calf raiser determines the greatest return. Every participant in the production of this type of veal must realize there are several alternatives, when choosing a marketing practice to follow.

Transportation

Transportation to move calves from farm-to-slaughter is important when calculating returns from a premium veal operation. The hauling cost may be a direct charge or concealed in the total net price received. Some buyers insist upon the grower paying the hauling fee, which ranges from $1 to $3 per calf, depending upon the mileage traveled and the size of the load.

The pattern of handling transportation of the calves is not clear cut at this time. It appears that certain slaughterers may have different arrangements with individual growers in various locations. No definite contracts have been negotiated with truckers to obtain uniform charges.

A change in a production pattern and a concentration of growers could result in different hauling charges, especially if a predetermined number of calves were shipped each week.

From limited information, it appears that larger growers obtain more favorable trucking rates than small ones. Economies of scale become a factor in this determination as the trucker does not make time-consuming stops to pick up calves. While a pooling arrangement of small growers might obtain lower transportation rates than small individual ones, the costs would remain 20 to 25 percent higher than those for larger growers.

If it appears feasible for low-income people to engage in the raising of veal or calves for beef production, truck-pooling may prove the lowest transportation arrangement. This would permit a hauler to establish routes that would be followed at predetermined times. It would be necessary for several owners to finish their calves at the same time before contracting with a trucker for calf pick-up. This type of arrangement may be a necessity for small producers that do not have their own trucks or find livestock trucks unavailable in the area.

Production Practices, Management, Costs and Returns

It is not practical to consider the production of calves fed on the milk replacer for either premium veal or calves for beef, unless good management, production, and marketing practices can be followed. Baby calves removed from mother cows are under stress and are prone to disease and respiratory problems. This is a common problem for young animals coming from various dairy herds and handled under varying transportation and weather conditions.

The handling and feeding of baby calves requires constant attention and skill. It has been found that calves perform better and are more likely to remain disease free if they are raised under controlled conditions of 60° temperature and 60% humidity. Changes in the environment invite trouble in the form of respiratory problems. Ideal conditions are difficult to obtain, except in specially-constructed buildings with automatic controls. This investment cost is generally considered too high for the small grower, but the unit cost can be reduced as the capacity of the feeding facility is increased.

It is generally acknowledged that the first 2 weeks calves are placed on feed are the most critical as far as disease problems are concerned. Calves that have any indication of disease should not be purchased, as medication and slow growth eliminate an opportunity for profit.

Good management is the key to holding down mortality and obtaining the best returns from calf raising. This requires constant inspection at feeding time and at every other opportunity the grower has available. Unless indications of poorly performing calves are caught early enough for prompt treatment, heavy losses can result. To be highly successful growers must be willing to work at all hours of day and night.

Feeding requires scheduling and must be done regularly each day. Calves should be fed at least twice daily with a break of no longer than 12 hours between feeding. If this schedule is changed, the calves go off feed, will not gain, and may even develop digestive upsets that make them susceptible to disease and possibly death.

Range in Cost of Facilities

Old buildings, such as dairy barns or poultry houses, can be converted to calf-feeding facilities. However, any enterprise of an economic size probably should start with a building specifically designed for calf feeding.

The basic things needed in a calf feeding operation are the following: (1) A building that can be made draft free, (2) fans and vents to move air and to eliminate heat and odors, (3) a boiler to furnish an adequate supply of hot water for mixing feed and cleaning calf pens, (4) adequate supply of iron-free water or treatment equipment to supply potable water (iron in the water supply discolors veal meat), (5) heat to maintain proper temperature in cold weather, (6) a sewage disposal system--generally a septic tank will suffice to hold waste from the calves, (7) crates or stalls for holding calves, (8) mixing equipment for combining milk replacer and water for calf feed, (9) insulated walls and ceilings, (10) easy-to-clean floors, and (11) a clean dry area for holding and mixing the milk-substitute feed.

Building costs can range from $35 per calf for old converted units to more than $200 per calf for new construction with automatic controls. In starting a veal-growing enterprise, a grower may wish to convert old buildings, if they are not to be used for other purposes. Many facilities that are available are not economical to convert to calf feeding because they require constant maintenance. In addition, it is almost impossible to obtain any degree of efficiency in old buildings that would reduce labor and time expended caring for the calves.

Calves can be fed in a building without stalls if pens are well-bedded, but this type of facility requires more labor. It also is difficult to observe sick calves and almost impossible to keep calves clean--even with heavy use of bedding materials.

Crates or elevated stalls are highly recommended in starting any calf-feeding venture. They provide a greater ease when feeding, cleaning buildings, or looking at calves. The calves are tied in the crates to keep movement at a minimum. No bedding material is needed, as the calves are on slat floors and all waste drops between the slats onto the building floor, where it can be flushed and scraped away. Crates cost more than open pens, but eliminating the need for bedding, faster feeding, and the ease of detecting diseased or off-feed calves makes them a good bargain, whether 10 or 500 calves are being fed.

Unit costs of the items needed for a 10-head building may be two to three times higher per calf than for a 250-head building. The only advantage of a small unit, when using all converted buildings, would be that total building costs would not be charged to the feeding venture as is done when starting with new construction.

Prices Received at Different Market Stages

The important price in the marketing chain is the one received by the calf grower. Unless he can realize a good return on his investment, there is little incentive to participate in growing veal calves. Other prices in the marketing chain are those received by dealers handling calves and slaughterers that wholesale carcasses.

Two prices prevailed in January 1972. A farm price of $56 per hundred, live weight, was common for choice calves weighing 250 to 325 pounds. A comparable price for dressed carcasses with hide ranged from $81 to $83.50 per hundredweight. If the live weight level rose to 65 cents per pound, the carcass grade-and-yield price should range from 95 cents to $1 per pound. The carcass price was paid to farmers selling on a carcass-yield weight for choice calves. Calves that grade under choice are sold at substantial discounts, depending on whether the carcass can be sold for cutting or must be boned for manufacturing and processing.

Slaughterers received $83.50 to $85 per hundredweight wholesale, when they sold the carcasses. The pluck-heart, liver, tongue, brains, glands, hide, and miscellaneous items generally are of sufficient value to cover slaughtering and handling costs.

Prices for both live calves and dressed veal fluctuate widely over a period of time. However, prices have remained above 50 and 80 cents per pound, respectively, for live and dressed veal calves. With the shortage of choice veal, prices are expected to remain within the existing price range or may rise if demand increases. Veal prices do move with other meat prices, such as beef and pork. When meat prices rise or fall, veal follows somewhat the general pattern of all meat products but with fewer rapid fluctuations.

Any net price received by farmers and slaughterers must consider selling commission, buying commission, and transportation cost for live calves and dressed carcasses.

Costs of Producing Veal

The costs of producing veal fed a milk replacer as a feed depends upon inputs. No labor charge is included as gross return is expected to apply to both labor and management. An often-quoted figure is that profit per calf is $25. This is obtained under optimum conditions of managing and marketing. Since the price of young calves and feed vary, many variables must be considered, such as medication, mortality, buying and selling charges, fixed costs of buildings and equipment, and transportation.

Holstein bull calves are generally purchased at about 100 pounds, although thrifty calves can be as light as 85 pounds. Calves weighing in excess of 115 pounds increase the calf cost to a point that it is difficult to make a satisfactory margin from feeding.

It is necessary to assume average costs in making any projection of the cost of production, while recognizing that figures will deviate. The differences may result from the cost of the baby calf, cost of feed, conversion rates (pounds of feed necessary to produce a pound of gain), death and loss from culling calves, buying charges, trucking charges, selling charges, and price obtained for finished animal. Feed cost can range from 22 to 30 cents per pound, depending upon the type of ingredients in the feed formula.

Table 4 is estimated costs and returns from 10 calves. Feed conversion rate is calculated on the basis of 1.5 pounds of feed for each pound of gain. Cost of feed is charged to $590 per ton.

Table 4.--Costs and returns for 10 calves, Jan. 1972

Item	Amount
Costs:	
Calves - 10 head @ 100 pounds	$ 420.00
Buyer commission	20.00
Trucking charges	20.00
Feed cost	914.00
Drugs	20.00
Death loss	42.00
Fuel and electricity	20.00
Depreciation of equipment	15.00
Rent on building	25.00
Selling cost	18.00
Transportation	18.00
Interest and carrying charges	25.00
Miscellaneous	10.00
Total cost	$1,567.00
Returns:	
Sold 9 calves @ 325 pounds	$1,608.75
Profit	$ 41.75

The 10 calves used in table 4 are the minimum number that should be considered by an individual. Fewer calves would drastically increase the cost of building and equipment on a single-calf basis. Once a calf-feeding operation begins, it is assumed that three to three and one-half groups will be fed out and marketed each year.

Growers of the small lots of calves would not be expected to have the knowledge of prices to make competitive purchases of calves for feeding. Therefore, a buyer's commission of $2 has been charged. Trucking charges from a market to the feeder's location was charged at $2 per

head. This is a very reasonable charge, because the 10 calves are not a truck load and the weight is only 1,000 pounds.

The price of the calves was $42 per hundredweight. The smaller purchasers generally have to pay one to $3 more per hundred when one or two calves are purchased at a time as calves sold singly are more costly for a market operator to handle.

Feed costs include the feed fed to one calf that died early in the feeding period. The death loss is the original cost of the calf with other costs charged to the entire operation. Interest and carrying charges include the cost of money invested in calf feed and miscellaneous outlay.

The profit of $41.75 is the return for labor. This figure amounts to a little more than $4 per head on the original 10 calves.

Table 5 is an estimated cost of production and returns from 25 veal calves. Feed-conversion rate is calculated on the basis of 1.7 pounds of feed for each pound of gain with a cost of $590 per ton. The 1.7-pound conversion rate is not unusual, while a 1.5-pound rate is an optimum one.

Table 5.--Costs and return for 25 veal calves, Jan. 1972

Item	Amount
Costs:	
Calves - 25 head @ 100 pounds	$1,050
Buyers commission	50
Trucking charges	50
Feed cost	2,350
Drugs	50
Death loss	84
Fuel and electricity	50
Depreciation of equipment	40
Depreciation of building	60
Selling cost	35
Transportation	46
Interest and carrying charges	62
Miscellaneous	25
Total cost	$3,952
Returns:	
Sold 23 calves @ 300 pounds	$3,854
Profit	$ (98)[1/]

1/ Denotes loss.

Table 5 costs and returns for 25 calves are calculated upon the basis that buyer's commission, trucking charges from market to farm, selling costs, and transportation of the finished calves remain constant for 10 and 25 calves. Both lots are small for dealers and truckers with fixed costs.

The feed conversion rate of 1.7 pounds feed for each pound of gain is higher than that used in table 4. However, it is not unrealistic as feed conversion may range from 1.4 to more than 2 pounds. There would be no cost savings in purchase of feed for this number of calves over

the smaller lot. No gain in market power could be expected with only 23 calves for sale at any one time. Death loss in both tables 4 and 5 are figured on the basis of 10 percent. Table 5 shows only a loss of two calves, which would be expected, because the larger feeder might keep closer supervision. The losses must be counted in total calves, because while some feeders show less than a 10 percent loss, a whole calf not a percentage, dies.

A higher feed conversion rate accounts for the loss on this operation. If there had been less death loss, a possible profit of $70 would have accrued for the return of labor.

Table 6 makes allowances for built-in (per-unit) savings as size of the calf-feeding operation is increased. Buying and selling charges can be reduced on larger lots of calves. Larger quantity purchases of feed results in lower cost per ton. A calf feeder handling 100 calves at a time would be expected to be a better manager, thereby experiencing a lower death loss. The larger unit would generally remain in business for a longer period of time, which would lessen depreciation costs for building and equipment. The leverage of size can be used in selling direct to a slaughterer and a possible gain can be made by selling calves by carcass weight. Calf slaughterers are more willing to pay higher prices on the larger lots of calves, as it reduces the cost of record-keeping at the plant.

Table 6.--Costs and return for 100 veal calves, Jan. 1972

Item	Amount
Costs:	
Calves - 100 head @ 100 pounds	$ 4,100.00
Trucking	100.00
Feed cost	8,300.00
Drugs	150.00
Death loss	205.00
Fuel and electricity	150.00
Depreciation of equipment	150.00
Depreciation of building	300.00
Transportation to slaughter plant	200.00
Interest and carrying charges	240.00
Miscellaneous	100.00
Total cost	$13,945.00
Returns:	
95 calves sold carcass weight 19,950 pounds @ 83.5¢ per pound	$16,658.25
Profit	$ 2,713.25

The hundred-head unit is estimated to have a feed conversion ratio of 1.5 pounds of feed for each pound of gain. Feed cost is $560 per ton. The larger operator can increase his profit margin, through savings in buying, selling, and marketing cost. Feed cost is also generally less. The larger feeders generally sell their calves at the farm and may not have any transportation charge.

Dressing percentage is calculated at 70 percent for live weight calves. An increase of one percent would add to the profit, but a decrease would add to the cost of production.

A change of 1 cent per pound in price, for either the live animal or dressed carcass, will substantially change the profit realized. If a combination change in both dressing percent and price occurs at the same time, the profit could be increased or decreased by as much as $2 per cwt. Both price and carcass yield become important when determining net income from a veal calf operation.

All the calves in a lot are not expected to finish equally in either quality or weight. The differences in finish will also affect the profit of any production venture. It was necessary to use averages for the calculations to reach realistic conclusions.

The cost-and-return figures have been calculated for 10-, 25-, and 100-calf lots at one time. Three to three-and-one half lots can be finished in a year, using a feeding period of 12 to 14 weeks, plus time to clean the premises between lots. These small numbers are considered for a part-time job--or supplementing income for farmers--or for those working at non-farm jobs. In all examples, more than one person is expected to be involved in the calf-raising venture, such as a husband-wife team. This arrangement is important as the calves should be observed occasionally between regular feedings to determine the health and physical appearance of the calves.

It is possible for one man to handle 250 to 300 calves at one time; however, it is a full-time job and should have some back-up help in emergency situations. Any larger feeding operation will involve several part- or full-time employees, plus a good manager. While no costs and returns are calculated for larger numbers of calves, it is assumed that profit per calf would be greater than for the 100-size group.

Potential for Veal Feeding by Low-Income People

The potential for low-income people to supplement their income by feeding veal calves has been suggested by some individuals. Exact projections cannot be made on the income expectations for this group; because few, if any, would have had previous experience in veal production. Some form of management supervision would need to be provided for inexperienced people entering veal raising. A management supervisor should have no more than 10 growers under his control. This cost would be about $10,000 each year, or about $1,000 per grower. If the veal growers were charged this supervisory cost, income generated would be insufficient to justify entry into the business.

Any number of calves produced can find a market. However, the prices paid at the market outlet might not be enough to cover production costs. The highest prices are obtained when the supply of calves are of a size to attract slaughter buyers and be produced in sufficient quantity to provide uniform delivery both in number and frequency. Size and uniformity at the time of sale is important because a slaughterer develops a market outlet that must be filled each week.

Requirements for Success

To achieve any degree of success with the low-income producers, it appears that at least 300 animals should be available weekly to market. This is a minimum number required to obtain competitive advantages in buying young calves and in marketing the veal to slaughterers. To supply the 300 calves would require 420 growers each producing 10 calves at a time, or 42 feeding 100 during each feeding period. Calves would need to

be marketed each week to keep buying and selling outlets available. Good management supervisors would be necessary to help develop veal growers to overcome problems. Even with proper supervision, only a limited number of low-income people would be expected to become proficient in raising top-quality veal at a profit, as it has proved to be a high-risk business for experienced calf feeders.

It would be highly questionable that sufficient numbers of small growers could be obtained to support a separate slaughter facility. It is estimated that a plant would need to slaughter a minimum of 40,000 to 50,000 head annually to successfully compete in the veal market. This type of plant would require at least $1 million for facility and operating capital the first year.

Two methods of marketing veal production from low-income growers should be considered. The first is to sell for cash to a slaughter plant with sales made on live or carcass weight, depending upon shrinkage, transportation charges, and other factors. A second method would be to have calves custom-slaughtered and use a broker to sell carcasses in a metropolitan market. The success of this latter method would depend upon obtaining a large number of participants who would sell their calves at the same time. It would also require additional capital to carry accounts receivable and transportation charges.

Returns for Low-Income People

The margin, or profit, from growing high-quality veal in small numbers does not indicate that it would be a worthwhile venture for low-income people. Any effort to train this group would require several thousands

of dollars of public funds with the expectation that only a few would remain in the veal-growing business more than a short time. Calf raising requires attention 7 days a week by the same people. Earlier figures in tables 4 and 5 indicate labor return could be about 40 cents per hour or there would be a sizable loss.

Alternatives to Veal Production

Alternatives and assistance are considered here, because individuals and groups working with urban low-income people think it would be more economical for Governmental agencies to move these people to rural areas. It has been suggested that the low-income people would fare better located in some of the abandoned farms in the North Atlantic area and that it would require less money for supporting the poor people. Veal growing has been assumed to be a natural way for this group to make additional income as dairy calves are available in the region and veal production by dairymen has been rapidly declining for several years.

Several alternatives in veal production can be considered by low-income people. One possibility would be a grant-in-aid to finance supervisory personnel to help the growers. This type of help has been provided by charitable foundations, religious groups, and Government agencies. Most of these sources make grants to help the under-employed enter some type of business.

While grants usually cover advisory or supervisory assistance, in limited instances funds have been designated for buildings, raw materials (animals), organizational activities, and other non-recurring items.

This type of help is most common, when it benefits a community or a substantial number of people with problems in common.

A second alternative would be for an operating farmers' cooperative to provide the know-how and a portion of the financial assistance needed until the low-income people gained experience and economic backing to operate a veal business.

Another possibility would be for an organized group of community leaders to help potential veal growers. If this course is followed, the leaders should not expect reimbursement for the initial outlay of capital to start the veal production units. They might gain in the long run from side-benefits through additional dollars spent in the community by a new veal growing venture for services.

Contracts

Contract arrangements offer some opportunity for veal production but are limited in the North Atlantic States, although their use in the upper Midwest is more common. An evaluation has not been made of existing contractual arrangements to determine advantages or disadvantages for participants. Contracts do have the possibility of supplying some capital needs, supervision, and marketing for low-income people, until they accumulate enough funds to either provide or borrow capital to finance their operations.

Most contractual arrangements require that the veal growers provide the buildings, equipment, and labor needed. All feed, animals, and other necessities are provided by the other party to the contract. A fee paid to the grower, based upon the number of calves fed, appears to be the most

common practice. While the contract route may eliminate a large share of the inherent risk in growing veal calves, it also limits income to the growers in years of high returns.

It is estimated a $2 fee per calf each week would be needed to adequately compensate a grower for investing in facilities and equipment. Feeders with existing facilities may be able to handle calves at lower fees. The contractor would make a margin on feed and other supplies furnished the calf grower.

Integrated Cooperative Potential

The use of an integrated cooperative is one method that has been considered to both expand veal growing and help low-income people. The integrated cooperative could supervise the production, processing of veal calves, and the distribution of meat. Any or all of the phases of production and marketing could be furnished by cooperative arrangements. Contractual, or joint venture, arrangements for various steps in the production and marketing could be used if it were advantageous to a cooperative.

Cooperatives providing many other services now operate in the North Atlantic States. It is assumed that one of these organizations could furnish services to veal producers at less cost than a totally new organization. A cooperative, already involved in food production and marketing, might profitably add another line, such as veal products, to sales items. The highest margin in the meat business is realized with further processing and sale of consumer-ready products like breaded chops,

uniform portion-controlled items, and deboned cuts of meat. Veal is the type of meat that lends itself to consumer-ready preparation and has an acceptable market at the present time.

The incentive for a cooperative to become engaged in this type of business results from side benefits of additional sales and margins from feeds and supplies.

Sources of Capital

An integrated cooperative engaged in veal production will require large sums of capital to own facilities, supply animals and feed, own processing facilities, and merchandise meat and meat products. While the amounts may appear large, established cooperatives have several sources of capital. The following sources could provide capital: Member contributions, stock, bonds, retains, and the like; loans from a bank for cooperatives, private banks, insurance companies, and other lenders; limited partnership arrangements; and investment holding companies that may be a subsidiary of a large cooperative. Capital requirements may be lowered, if leasing arrangements can be negotiated with equipment suppliers and slaughter and processing plants to slaughter veal on a custom basis.

Benefits of an Integrated Cooperative

The benefits of an integrated cooperative over individual calf growers, or cooperatives providing specialized services with coordination, are as follows: (1) Interest charges on capital would be less as the amounts of capital needed would be consolidated; (2) purchases of animals and supplies would be handled in larger lots thereby cutting unit cost;

(3) better control over quality and supply of end products if coordinated by one cooperative; (4) all segments of production, processing, and marketing would be in a single unit that should lower overhead costs; and (5) type and quality of management should be better than that provided by a small specialized unit operating separately.

A more detailed feasibility study to explore the benefits and methods of operation of an integrated cooperative is suggested. This type of study would provide the costs and returns from each production-processing and product-marketing activity.

Beef from Dairy Animals

An alternative to veal production that should be considered is further feeding dairy-type calves for beef. Results shown in tables 7 and 8 indicate that a profit of more than $50 per animal could be realized. These results were obtained after discounting dairy-type beef prices at slaughter. Today the live-price spread between beef breeds has narrowed to $2 to $4 per hundredweight even when dairy beef grades lower.

Cull dairy cows and bulls have provided a substantial proportion of the United States beef supply for many years. The meat from the dairy animals has historically been used to make hamburger meat and sausage items, with only a small amount sold as block beef. An exception has been the high demand for beef from bulls in Pennsylvania fed a high-concentrate warm-up ration. Evidently a group of people exists that prefer the dairy-type beef.

The change in feeding and management practices has enabled feeders to finish Holstein calves on a high-energy ration within a 12- to 14-month

time period and at weights of 1,000 to 1,200 pounds that wholesalers, retailers, and especially consumers demand. The end product of dairy calf production into beef is readily accepted and often is grown at lower cost than that of the familiar beef breeds.

This type of production is considered in this report as it presents an alternative way to make better use of the dairy calf in the North Atlantic States. It is estimated that dairy calves, if carried to fed beef weights, would supply about three times more meat for consumers than the calves slaughtered for veal at lighter weights.

State experiment station and individual records indicate that profit is greater for calves fed for beef. The following table is the one example that calves for beef also can be produced at lower cost than veal.

Table 7.--Costs and returns on 100 dairy calves for beef, Jan. 1972

Item	Amount
Costs:	
Calves - 100 head @ 100 pounds	$ 4,100
Trucking	100
Feed cost	6,225
Drugs	75
Death loss	164
Fuel and electricity	75
Depreciation of equipment	50
Depreciation of building	150
Marketing	100
Transportation	300
Interest and carrying charges	150
Miscellaneous	100
Total costs	$11,589
Returns:	
98 calves at 350 pounds 34,300 pounds sold live weight @ 45¢ per pound	$14,435
Profit	$ 2,846

Dairy calves used for beef production are fed the same as those for heavy veal the first 2 or 3 weeks of their lives. They are taken from their mother, placed on milk replacer--liquid-mix feed. After 2 weeks the calves that are designated to go into feedlots for beef are fed free-choice grain along with milk replacer. The calves eat more grain or mill-mixed feeds as the milk replacer is reduced. Corn and other supplements are less costly than the milk replacer. Also, the calves are developing the habit of feeding on grain, their chief diet until they reach slaughter weight.

The calves produced for beef feeding are gradually switched from a combination of milk replacer and free-choice grain until they are on 100 percent grain-mix feed at 300 to 350 pounds.

Table 7 gives the estimated costs and returns on 100 calves raised for beef animal feeding. When compared with table 6 costs and returns for 100 veal calves, the profit is $132.75 more for the beef-designated animals. The feed costs to produce premium veal in table 6 was 29.1 cents per pound, while the dairy calves for beef cost only 18.1 cents. A corresponding lower cost is noted in death loss and drugs. These calves are not under as much strain and stress as those being fed for veal and consequently have less sickness.

Alternative Outlets

A farmer raising dairy calves for beef production has two alternative outlets. One is to sell the calf to another feeder at 300 to 400 pounds weight. The other is to carry the calf on a high concentrate grain ration and market at about 1,000 pounds. Most of the dairy calves are from

holstein dairy herds. Since Holstein calves have the ability to make rapid and low-cost gains, they make good animals for a feeder. The cost of gains in various experiments range from 16 to 21 cents per pound from 350 to 1,000 pounds.

Cost of Production

The cost of production for calves designated for a feedlot operation is lower than those going to the heavy veal trade. The lower cost results from less milk replacer mix and the use of relatively low-cost grain.

Costs of production range from 10 to 15 cents per pound below those for veal. Margins obtained over all costs for dairy calves for beef range from $12 to $30 per head.

Results in tables 7 and 8 indicate a margin of profit over $49 for producing dairy calves for beef. This figure would be increased by $4 per head if the same feeder carried the calves all the way from the 100-pound weight to 1,000-pound beef. This spread could increase where special demand market outlets for this beef were developed or through the breaking of carcasses in portion-controlled cuts. The increasing consumption of beef guarantees a growing demand for lean beef from dairy-type animals.

Table 8.--Costs and returns on 100 calves fed to 1,000-pound beef, Jan. 1972

Item	Amount
Costs:	
Calves - 100 head @ 350 pounds	$15,000
Cost of gain	13,000
Death loss	150
Marketing	200
Depreciation of building and equipment	300
Transportation	200
Interest and carrying charges	200
Miscellaneous	100
Total costs	$29,150
Returns:	
99 beef sold @ 100 pounds @ 32 cents per pound	$31,680
Profit	$ 2,180

North Atlantic States have increased corn production and should be able to expand beef feeding. The dairy calf feeding to beef results, indicate that this should be a profitable venture in the area. It also offers greater utilization of some of the low-income or under-employed people. The location of this potential feeding area is close to the largest consuming markets that should accept more of the type of beef from dairy animals.

Appendix

Appendix table.--Slaughtering plants handling veal calves in North Atlantic States, 1971

Name	Address
Connecticut	
Home Pride Prov., Inc.	Stafford Sprgs.
Double A Meat Pkg. Co.	Beacon Falls
J. G. Forte, Inc.	North Branford
Maine	
Alco Packing Co.	Winslow
Massachusetts	
Snider Bros., Inc.	Wilkinsonville
Kenneth E. Baker	Swansea
New Hampshire	
Granite State Packing Co.	Manchester
New Jersey	
Insel & Insel	Newark
Miller Abattoir	N. Bergen
S. Schweid	Paterson
Midtown Veal & Mutton Co.	Newark
Allen Packing Co.	Linden
Victory Beef Co., Inc.	Bordentown
Chas. Miller	N. Bergen
Wagner Prov. Co., Inc.	Gibbstown
Dealaman Enterprises, Inc.	Warren
New York	
Utica Veal Co.	Marcy
Tobin Packing Co., Inc.	Rochester
Carr Packing Co., Inc.	Albany
Parnett Packing Corp.	Bloomville
Dewitt Packing Corp.	Syracuse
Fairbank Farms, Inc.	Ashville
Greendell Pkg. Corp.	Prattsville
Elmer Bender & Son, Inc.	Buffalo
Perretta Pkg. Co., Inc.	Brier Hill

--Continued

Appendix table.--Slaughtering plants handling veal calves in North Atlantic States, 1971; Continued

Name	Address
New York; cont.	
Carr Packing Co.	Cohoes
Monroe Packing Co.	Rochester
Amco Packing Corp.	Clark Mills
Pahler Packing Corp.	Potsdam
E. F. Perretta & Co., Inc.	Malone
Walden Packing Co.	Walden
Party Packing Corp.	Utica
Ferber Meat Packing Co.	Ferndale
Cappelino Abattoirs, Inc.	Gouverneur
E. C. Hortein & Son, Inc.	Buffalo
Clover Pkg. Co., Inc.	Chester
Fort Plain Pkg. Co., Inc.	Nelliston
Selected Meat Packers, Inc.	Schenectady
Ralph Rkg. Co., Inc.	E. Syracuse
Maple Brook Packing House	Binghamton
Morris Mendel & Co.	Norwich
Klinck & Schaller, Inc.	Buffalo
Geo. Waldenmair & Sons	Feura Bush
Pennsylvania	
Montrose Beef Co.	Pittston
I. Kaplan, Inc.	Olyphant
Cross Bros. Meat Pkg.	Philadelphia
Acme Markets, Inc.	Greencastle
Kramer Beef Co.	Scranton
M. Brizer & Co.	Jermyn
T. M. Landes, Inc.	Mainland
Baums Meat Pkg.	Landsdale
Hershey Estates	Hershey
Rhode Island	
Anthony Parillo, Inc.	Johnston
Johnston Dress Beef & Veal	Johnston
Brunos Pkg. Co.	Westerly
Vermont	
Shonyo Packing, Inc.	Londonville
Swanton Packing Co.	Swanton

FARMER COOPERATIVE SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Farmer Cooperative Service provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The Service (1) helps farmers and other rural residents obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

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